

Only topographical anatomy and surgical technic are considered in these pages and the latter only so far as can be practised on the dead subject. The purpose of the book is to sum up and illustrate operative surgery for the beginner as well as the graduate. The book is made concise by omission of discussion of the various methods as to frequency, etc. Simple methods have been everywhere preferred to complicated ones and modern technic and the newer operations have supplanted those of time-honored usage.

The book is a good one of its kind, but, of course, is not a textbook of operative procedure in the living body. E. L. E.

PHYSIOLOGIC PRINCIPLES IN TREATMENT. By W. LANGDON BROWN, M.A., M.D. (CANTAB.), F.R.C.P., Physician with Charge of Out-patients, St. Bartholomew's Hospital; Physician to the Metropolitan Hospital, etc. Fourth Edition. Pp. 426. New York: William Wood & Co., 1920.

WE had the pleasure of reviewing the third edition of this work in 1914. Much has been learned during the intervening years concerning many points in physiology, and this much has been well woven into the fabric of the earlier edition to make this latest one even a better book than its predecessor. The same plan of subject treatment is carried out and the chapter headings remain unchanged. Brown calls well for his material upon the rich field which the English physiologic school supplies. We failed, however, to read something of Kendall's thyroxin and other interesting Cisatlantic contributions in recent years.

The chapters on diabetes and acid intoxications have received much revision. They are especially interesting because they call attention to the work of Graham, in St. Bartholomew's, on the fasting method of treating diabetes. Apparently quite independently Allen in this country, Graham in England, arrived at much the same conclusions concerning this therapeutic procedure. The war, however, prevented the publication of Graham's results in any sort of comprehensive form. Graham seems to advocate a short mitigated fast of forty-eight hours with a much more speedy addition of protein than Allen advises. Brown has had less experience with the Allen treatment, but feels that starvation to a glycosuria-free point may be more injurious to health than in the Graham forty-eight-hour method.

The chapter on irregular action of the heart remains untouched. The portion devoted to "the athletic heart" has, however, been abandoned for some lines on "the soldiers' heart" in the light of wartime experiences.

We like the book very much. It is helpful to the man who cares to apply newer physiologic principles to his clinical work. Brown has for a decade or more combined the practice of medicine in London with the teaching of physiology. The result has been the production of a splendid work with, of course, a decidedly English atmosphere.

T. G. S.

THE DETERMINATION OF HYDROGEN IONS. First Edition. By W. MANSFIELD CLARK, M.A., Ph.D., Chemist, Research Laboratories of the Dairy Division, United States Department of Agriculture. Baltimore: Williams & Wilkins Company, 1920.

THE limitations of this book are contained in the title. It is a detailed exposition of the colorimetric and electrometric methods for determining hydrogen ion concentration and does not enter into a discussion of the relation of hydrogen ion concentration to biological and chemical processes. The first chapter contains a general mathematical discussion of the relation of acids and bases to hydrogen ion concentration. The pH scale, buffer action, and effect of dilution are elucidated. In the course of the next sixty pages the theory and procedure in applying the colorimetric method are discussed. A brief exposition of the theory of indicators is given and in addition to directions for preparing the buffer mixtures with which the author's name is associated those for the mixtures of Sørensen, Walpole and Palitsch are also given. The electrometric method (potentiometer method) is discussed to the extent of 106 pages. In addition to an adequate presentation of the mechanical features the theoretical aspects are reviewed with considerable clarity. While the superiority of the potentiometer method over the older compensation procedures is unquestioned, in view of the expense of the apparatus it would seem as though some mention might have been made of the simpler equipment which served Sørensen and others so well.

A bibliography of sixty pages concludes the book. The references are classified and one may find what work has been done in a particular field with great facility. Among the subjects in the classification are bacteriology, blood, catalysis, cerebrospinal fluid, comparative and general physiology, digestion, hemolysis, iso-electric points, serology and urine.

The book is written from a critical viewpoint so that one may get a good idea of the sources of error and deficiencies of the methods as well as some comprehension of the direction research is taking in the elucidation of the obscure though minor phases of the general subject.

R. L. S.